Appendix 7-P Abandoned Equipment

On January 14, 2003 a roof fall occurred in the Hiawatha seam of the #1 Bear Canyon Mine. This roof fall buried a coal hauler, a distribution box, and a shop trailer. After the roof fall all remaining equipment was removed from the section and the area was sealed off. This is a concern for groundwater contamination since water monitoring site SBC-11 is in the area and there are floor and roof seeps in the area. The entry where the equipment was left is higher then the surrounding entries so water should flow around it. Also drainpipes were installed in the seals close to SBC-11 at a lower elevation than the abandoned equipment so water should drain out of the area before reaching the level of the equipment. The water is currently draining from the area through the pipes into monitoring site SBC-9A. Because of hazardous roof conditions in that area, it will be abandoned in 2003 or 2004 and the water will be allowed to fill until it reaches entry 26 at which point it will drain to the portals. Co-Op Mining Company uses the water for mine and culinary use and will continue to monitor it for the life of the mine. The anticipated path of the water is illustrated on the following diagram. A copy of the MSHA accident report has also been included. The area of the roof fall is also shown on Plate 7-10B.

Potential contaminants to ground water from buried equipment are battery acid and oil.

Current water sampling will detect these. The types and quantities are listed below.

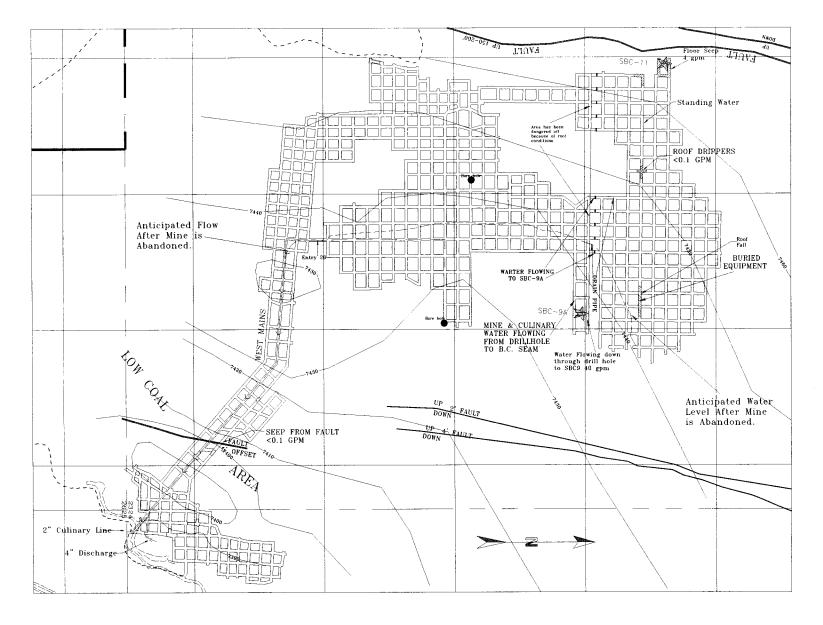
15 Gallons of R & O 150 in the gear boxes.

50-55 Gallons of Hydraulic oil.

20-28 Gallons of battery acid in the batteries.

MSDS's for the substances have been included.

Figure 7P-1 Hiawatha Seam Mine Water



U.S. Department of Labor

Mine Safety and Health Administration



Section A-Identification Data		Approved For	Use Through 06/30	/92, OMB Number 1219-0007
MSHA ID Number Contractor ID	Report Category			Check here if report pertains to contractor.
512-07697	Metal/Nonmetal Mining	[D€6al N	Aining	
Mine Name		Company Name		
WWW.	us comoa	<u>,, v</u>	2007 - 1	<u> </u>
Section 8—Complete for Each Reportab				
1. Accident Code (circle applicable code — s	uea instructions) 0	71 - Death 0	2 – Serious Injury	03 - Entrapment
04 - Inundation 05 - Gas or D	oust Ignition 06 Mine I	Fire 07	Explosives	08 – Roof Fall
09 — Outburst 1	0 - Impounding Dam	11 - Hoisting	12 – Offsite Inju	<u> </u>
2. Name of Investigator	3. Date Investigation Started	4, Steps T	aken to Prevent Re	currence of Accident
	Month Day Year			
New Weta	1 1/4 03			<u> </u>
 Section C—Complete for Each Reportab 				
5. Circle the Codes Which Best Describe Wh	ere Accident/Injury/Illness Occu	rred (see instructions)	Made 1	
(a) Surface Location. 02 Surface at Underg	round Mine 30 Mill, Preparati	on Plant, etc. 03 Str	ip/Open Pit Mine	04 Surface Auger Operation
05 Culm Bank/Refuse Pile 06 Dredg	ge Mining 12 Other Surface Min	ina 17 Independent S	hops lwith own MS	SHA (D) 99 Office Facilities
(b) Underground Location: 01 Vertical Sha		A second contract of the second contract of t	Section 1	
			and the second second	
(c) Underground Mining Method: 01 Longs		****		Hand 07 Caving 08 Other
6. Date of Accident 7. Tim	ne of Accident	8. Time Shift Started		
Month Day Year	_ Nam	/	⊈ am	
1 1 14 03 6	(4) Upm	6.70	∐ pm	
9. Describe Fully the Conditions Contributi	ing to the Accident/Injury/Illness	s, and Quantify the Dai	uade or Imbeltaleu	
Kool Lall IV	- 12 Left	72 X 1 7 7 7 1 1 1	<u> </u>	
X-01/4-0000X	30/X2004			<u> </u>
		7,74		
				<u> </u>
10. Equipment Involved Type		Manufacturer		lodel Number
11: Name of Witness to Accident/Injury/III	ness	12. Number of Repo	rtable Injuries or g from This Occurr	enca
13. Name of Injured/III Employee		14. Sex		15. Date of Birth
		☐ Male		Month Day Year
		Female		
16. Last Four Digits of Social 17.1 Security Number	Regular Job Title	18. Check if this Injury/Illness	L.] 19. Check if Injury/Illness sulted in permanent disability
		resulted in dea		nclude amputation loss of use,
		21. Nature of Injury		permanent total disability).
20. What Directly Inflicted Injury or Illness		Z), Welcon O, Injury	Or miness	
		Tarkia and tarent		cupational Skin Diseases
22. Part of Body Injured 23. or Affected	Occupational Illness (circle appl 22 Dust Diseases of the Lungs	23 Respiratory Condi	tions (toxic agents)	24 Poisoning(toxic materials)
	25 Disorders (physical agents	1) 26 Diso	rders (repeated trau	ima) 29 Other
			Years Weeks	
24, Employee's Work Activity When	Experience		rears vveeks	For Official Use Only
Injury or Illness Occurred		a ring mon ride	1	TOT UTTICIBLUSE UTILY
Injury or Illness Occurred	25. Experience in		garantana	Corres
Injury or Illness Occurred	26. Experience at	t This Mine		Degree Accident Even
	26. Experience at 27. Total Mining	This Mine Experience		Accident Type
Section D—Return to Duty Information	26. Experience at 27. Total Mining	t This Mine Experience Answer 30 & 31 w/r	CONT. S. A. P. A	Accident Type Accident Class
Section D—Return to Duty Information 28, Permanently Transferred or 29	26. Experience at 27. Total Mining n. 9. Date Returned to Regular Job	t This Mine Experience Answer 30 & 31 w/r	31:Number of Day Restricted Work	Accident Type Accident Class Scheduled Charge
Section D—Return to Duty Information	26. Experience at 27. Total Mining n 9. Date Returned to Regular Job Full Capacity (or item 28)	t This Mine Experience Answer 30 & 31 wt at 30, Number of Days	31:Number of Day Restricted Work Activity (if none	Accident Type Accident Class Scheduled Charge
Section D—Return to Duty Information 28. Permanently Transferred or 29 Terminated lif checked,	26. Experience at 27. Total Mining n. 9. Date Returned to Regular Job	t This Mine Experience Answer 30 & 31 w at 30, Number of Days Away from Work	31:Number of Day Restricted Work	Accident Type Accident Class Scheduled Charge
Section D—Return to Duty Information 28. Permanently Transferred or Terminated lif checked, complete items 29, 30, & 31)	26. Experience at 27. Total Mining n. 9. Date Returned to Regular Job Full Capacity (or item 28) Month Day Year	t This Mine Experience Answer 30 & 31 w at 30, Number of Days Away from Work	31:Number of Day Restricted Work Activity (if none	Accident Type Accident Class Scheduled Charge
Section D—Return to Duty Information 28. Permanently Transferred or 29 Terminated lif checked,	26. Experience at 27. Total Mining n 9. Date Returned to Regular Job Full Capacity (or item 28)	t This Mine Experience Answer 30 & 31 w at 30, Number of Days Away from Work	31:Number of Day Restricted Work Activity (if none	Accident Type Accident Class Scheduled Charge
Section D—Return to Duty Information 28. Permanently Transferred or Terminated lif checked, complete items 29, 30, & 31) Person Completing Form (name)	26. Experience at 27. Total Mining n. 9. Date Returned to Regular Job Full Capacity (or item 28) Month Day Year Title	t This Mine Experience Answer 30 & 31 wf at 30 Number of Days Away from Work (if none, enter 0)	31:Number of Day Restricted Work Activity (if none	Accident Type Accident Class Scheduled Charge
Section D-Return to Duty Information 28: Permanently Transferred or Terminated lif checked, complete items 29, 30, & 31)	26. Experience at 27. Total Mining n. 9. Date Returned to Regular Job Full Capacity (or item 28) Month Day Year Title	t This Mine Experience Answer 30 & 31 wf at 30 Number of Days Away from Work (if none, enter 0)	31:Number of Day Restricted Work Activity (if none	Accident Type Accident Class Scheduled Charge
Section D—Return to Duty Information 28. Permanently Transferred or Terminated lif checked, complete items 29, 30, & 31) Person Completing Form (name) Date This Report Prepared (month, day, ye	26. Experience at 27. Total Mining n. 9. Date Returned to Regular Job Full Capacity (or item 28) Month Day Year Title	t This Mine Experience Answer 30 & 31 wf at 30 Number of Days Away from Work (if none, enter 0)	31:Number of Day Restricted Work Activity (if none	Accident Type Accident Class Scheduled Charge
Section D—Return to Duty Information 28. Permanently Transferred or Terminated lif checked, complete items 29, 30, & 31) Person Completing Form (name)	26. Experience at 27. Total Mining n. 9. Date Returned to Regular Job Full Capacity (or item 28) Month Day Year Title	t This Mine Experience Answer 30 & 31 wf at 30 Number of Days Away from Work (if none, enter 0)	31:Number of Day Restricted Work Activity (if none	Accident Type Accident Class Scheduled Charge

rage 3 Mail This Copy to Denver Safety and Health Technology Center, P.O. Box 25367, Denver, Colorado 80225 When Return to Duty Information is Complete if It was Not Present on Page 1 When Mailed.

B.C. 7P-4



SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

PRODUCT IDENTIFICATION: . . : RENOLIN AW68 Hy6 @ oil (1.9)

MANUFACTURER IDENTIFICATION

Company Name. : FUCHS LUBRICANTS CO. Address : 17050 LATHROP AVE.

> HARVEY IL 60426

Telephone : 708-333-8900

Emergency Contact . . . : Regulatory Compliance Department Emergency Telephone . . . : 708-333-8900 (8am - 5pm CST, M-F)

800-255-3924 (24 Hours)

MSDS PRINT DATE : 09/13/2002

* EMERGENCY OVERVIEW

This product is a liquid that is insoluble in water. Direct eye contact may cause temporary irritation. Short term skin exposure is not expected to be irritating. Inhalation and ingestion are not anticipated routes of exposure during normal conditions of use.

* HMIS Rating: Health- 1 Flammability- 1 Reactivity- 0

SECTION 2 - COMPONENT DATA

Components listed in this section may contribute to the potential hazards associated with exposure to the concentrate. The product may contain additional non-hazardous or trade-secret components.

Mineral Oil

Cas#: proprietary Percent: > 90

Exposure Limit:

ACGIH TLV: ACGIH STEL: OSHA PEL:

5 mg/m3 (as mist) 10 mg/m3 (as mist) 5 mg/m3 (as mist)

- Carcinogenic Components: This product contains no carcinogens.

SECTION 3 - HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS and SYMPTOMS from SHORT TERM/ACUTE EXPOSURE:

- EYE EXPOSURE -This product is not expected to cause eye irritation under normal conditions of use. Symptoms of temporary eye irritation and redness
 - may result upon direct contact or when exposed to high mist levels in poorly ventilated areas.
- SKIN EXPOSURE -

Short term skin contact is not expected to cause skin irritation. Prolonged or repeated direct exposure to the skin may result in



PRODUCT NAME: RENOLIN AW68

symptoms of irritation and redness. In severe cases, prolonged or repeated contact may result in dermatitis accompanied by symptoms of irritation, itching, dryness, cracking and/or inflammation.

- INHALATION This product has low volatility and so is not expected to cause respiratory tract irritation during normal conditions of use. Exposure to high mist levels in poorly ventilated areas may cause upper respiratory tract irritation and difficulty breathing.
- INGESTION Ingestion may cause slight stomach irritation and discomfort.

POTENTIAL CHRONIC HEALTH EFFECTS: No further data known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:
No further data known.

CARCINOGENICITY:

This product is not listed as a known or suspected carcinogen by IARC, OSHA, or the NTP.

SECTION 4 - FIRST AID MEASURES

EYE CONTACT:

Upon direct eye contact, hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. If irritation is due to exposure to mist or vapors, remove the individual to fresh air. If irritation persists, flush the eyes with clean water until the irritation subsides. If symptoms persist, contact a physician.

SKIN CONTACT:

Remove product from the skin by washing with a mild soap and water. Contaminated clothing should be removed to prevent prolonged exposure. If symptoms of exposure persist, contact a physician.

INHALATION:

Inhalation is not an expected route of exposure. If respiratory irritation or distress occurs, remove the employee to fresh air. Contact a physician or other medical professional if irritation or distress persists.

INGESTION:

If small amounts are ingested, first aid measures are not likely to be necessary. If larger amounts are ingested or if symptoms of ingestion occur, dilute stomach contents with two glasses of water or milk. (NOTE: Do NOT give anything by mouth to an unconscious person.) Do not induce



This product is	stable.	÷	£.				
	SECTION	11 -	TOXIC	OLOGICAL	INFORMATI	ON	
EYE EFFECTS:							
No further toxic	ological	data	known	•			
SKIN EFFECTS:							
No further toxic	ological	data	known	•			
ORAL EFFECTS:							
No further toxico	_	data	known.	•			ا رساسه
INHALATION EFFECTS No further toxic	•	da+a	known			,	
NO TUICHEL COXICO	DIOGICAL	uata	KIIOWII	•			
OTHER: No further data l	enown.						
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ECOTOXICOLOGICAL II This product has industrial chemic minimized wherever ENVIRONMENTAL FATE The degree of bic	SECTION NFORMATION not been cal, exponent er possible SECTION ection, ters and rete that use the matsibility	on: n evaluate ole. oility villate ranspringations, received of the	luated to the y and port, the comparistured to be the process.	for economic environments with the colors with	toxicity. ment shounder of this SIDERATION t, and distant appressing, or fied as a r or owner	As with ald be pressed of contaminate to determine	waste laws and ation of the waste.
No further data in the second	SECTION NFORMATION not been cal, exponent er possible section, the section, the section and received the matsibility, whether	on: n evaluate osure ole. oility vianspring insatise, receive of the	port, the composition of the composition of the production of the	for ecompersister DSAL CONSTRUCTION treatment olies with e, proces e classificat uses that is recompersion	toxicity. ment shounder of this SIDERATION t, and distant appressing, or fied as a r or owner	As with ald be product as product as product as product as product as posal of contamination and a product as a paragraph as a paragraph as paragrap	waste laws and ation of the waste.

L0175



_/	
PR	ODUCT NAME: RENOLIN AW68
	SARA 313: This product contains NONE of the substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.
	Clean Water Act / Oil Pollution Act: This product contains mineral oil and is subject to regulation by Section 311 of the Clean Water Act and the Oil Pollution Act. Release of the product into or leading to surface waters must be reported to the National Response Center at 1-800-424-8802.
	CERCLA Reportable Quantity: Any components listed below have been assigned a reportable quantity (RQ) by the Federal EPA. Releases of the product into the environment that exceed the RQ for a particular component must be reported to the National Response Center at 1-800-424-8802.
	Component RQ
•	Toxic Substances Control Act: The components of this product are listed on the TSCA Inventory.
. (Ozone Depleting Substances: This product contains no ozone depleting substances as defined by the Clean Air Act.
:	Hazardous Air Pollutants: Any components listed below are defined by the Federal EPA as hazardou air pollutants.
	Component
	* - * - * - * - * - * - * - * - * - *
	ATE REGULATIONS: This product contains mineral oil, and as used, may be regulated by stat used oil regulations. Check with the appropriate state agency to determine whether such a regulation exists.
•	No further data known.
_	SECTION 16 - OTHER INFORMATION
	Prepared by : Corporate Regulatory Compliance Date of issue



SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION
PRODUCT IDENTIFICATION: : POWERGEAR EPS (Gent Oil)
MANUFACTURER IDENTIFICATION
Company Name : FUCHS LUBRICANTS CO.
Address : 17050 LATHROP AVE.
HARVEY IL 60426
Telephone : 708-333-8900 Emergency Contact : Regulatory Compliance Department
Emergency Telephone : 708-333-8900 (8am - 5pm CST, M-F)
800-255-3924 (24 Hours)
MSDS PRINT DATE : 09/13/2002
+ EMERGENOV OVERVITEV
* EMERGENCY OVERVIEW This product is a liquid that is insoluble in water.
Direct eye contact may cause minor, short term irritation. Short term
skin exposure is not expected to be irritating. Inhalation and ingestic
are not anticipated routes of exposure during normal conditions of use.
* HMIS Rating: Health- 1 Flammability- 1 Reactivity- 0 PPE- X
SECTION 2 - COMPONENT DATA
Components listed in this section may contribute to the potential
hazards associated with exposure to the concentrate. The product may contain additional non-hazardous or trade-secret components.
contain additional non-hazardous of trade-secret components.
Mineral Oil Cas#: proprietary Percent: < 95
Exposure Limit:
ACGIH TLV: 5 mg/m3 (as mist)
ACGIH STEL: 10 mg/m3 (as mist) OSHA PEL: 5 mg/m3 (as mist)
OSHA FED: 5 mg/m3 (as misc/
- Carcinogenic Components: This product contains no carcinogens.
SECTION 3 - HAZARDS IDENTIFICATION
POTENTIAL HEALTH EFFECTS and SYMPTOMS from SHORT TERM/ACUTE EXPOSURE: - EYE EXPOSURE -
This product is not expected to cause eye irritation under normal conditions of use. Symptoms of slight eye irritation may result when direct contact occurs, or when exposed to high mist levels in

- SKIN EXPOSURE -

poorly ventilated areas.

Short term skin contact is not expected to cause skin irritation. Prolonged or repeated direct exposure to the skin may result in



PRODUCT NAME: POWERGEAR EP5

symptoms of irritation and redness. In severe cases, prolonged or repeated contact may result in dermatitis accompanied by symptoms of irritation, itching, dryness, cracking and/or inflammation.

- INHALATION -

This product has low volatility and so is not expected to cause respiratory tract irritation during normal conditions of use. Exposure to high mist levels in poorly ventilated areas may cause upper respiratory tract irritation and difficulty breathing.

- INGESTION -

Ingestion may cause slight stomach irritation and discomfort.

POTENTIAL CHRONIC HEALTH EFFECTS:

No further data known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

No further data known.

CARCINOGENICITY:

This product is not listed as a known or suspected carcinogen by IARC, OSHA, or the NTP.

SECTION 4 - FIRST AID MEASURES

EYE CONTACT:

Upon direct eye contact, hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes. If irritation is due to exposure to mist or vapors, remove the individual to fresh air. If irritation persists, flush the eyes with clean water until the irritation subsides. If symptoms persist, contact a physician.

SKIN CONTACT:

Remove product from the skin by washing with a mild soap and water. Contaminated clothing should be removed to prevent prolonged exposure. If symptoms of exposure persist, contact a physician.

INHALATION:

Inhalation is not an expected route of exposure. If respiratory irritation or distress occurs, remove the employee to fresh air. Contact a physician or other medical professional if irritation or distress persists.

INGESTION:

If small amounts are ingested, first aid measures are not likely to be necessary. If larger amounts are ingested or if symptoms of ingestion occur, dilute stomach contents with two glasses of water or milk. (NOTE: Do NOT give anything by mouth to an unconscious person.) Do not induce



PRODUCT NAME: POWE	RGEAR	EP5
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SARA 313:

This product contains NONE of the substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Clean Water Act / Oil Pollution Act:

This product contains mineral oil and is subject to regulation by Section 311 of the Clean Water Act and the Oil Pollution Act. Releases of the product into or leading to surface waters must be reported to the National Response Center at 1-800-424-8802.

CERCLA Reportable Quantity:

Any components listed below have been assigned a reportable quantity (RQ) by the Federal EPA. Releases of the product into the environment that exceed the RQ for a particular component must be reported to the National Response Center at 1-800-424-8802.

Con	ogn	ne	nt												R	2			
 _	_			_								 						 	
*	_	+	_	•	_	• _	. +	_	•	_	+	 +	_ 4	. .	•	_	* -	 _	•

Toxic Substances Control Act:

The components of this product are listed on the TSCA Inventory.

Ozone Depleting Substances:

This product contains no ozone depleting substances as defined by the Clean Air Act.

Hazardous Air Pollutants:

Any components listed below are defined by the Federal EPA as hazardous air pollutants.

 Com	ponent							<u> </u>				_
_	-	 -	_	-	-	-	-	-	-	•	•	•

STATE REGULATIONS:

This product contains mineral oil, and as used, may be regulated by state used oil regulations. Check with the appropriate state agency to determine whether such a regulation exists.

No further data known.

	 SE	CT.	101	1 :	16	_	07	CHI	ER	INFORMATION
Prepared by Date of issue Last Revision Date C3601223					•				:	



PRODUCT NAME	: POWERGEAR EI	P5 					
This produc	ct is stable.						
	SECTION	11 - TO	CICOLOGIC	CAL INFORM	MATION _		
EYE EFFECTS: No further	toxicological	data kno	own.				
SKIN EFFECTS No further	: toxicological	data kno	own.				
ORAL EFFECTS No further	: toxicological	data kno	own.		-	**	· · ·
INHALATION E	FFECTS: toxicological	data kno	own.				
OTHER: No further	data known.					•	
	SECTION	N 12 - EC	COLOGICAI	INFORMA	CION		
ENVIRONMENTA	of biodegradah		nd persis	stence of	this prod	iuct has	not
	SECTION	V 13 - DI	SPOSAL C	ONSIDERA'	TIONS		
product, corregulations product may	AL: t collection, to containers and re s. Note that to y cause the mat responsibility sposal, whether	rinsate on the control of the property of the	complies cure, pro be class croduct u	with all ocessing, ssified as a ser or over the ser or over th	applicable or contains a hazard when to de	le laws mination dous was etermine	and n of the ste. e at the
	SECTIO	ON 14 - T	RANSPORT	'INFORMA	TION		
	S MATERIAL INFO	ORMATION:					
	SECTION	N 15 - RE	GULATORY	INFORMA	rion		
FEDERAL REGU	LATTONS.						

EAST PENN manufacturing co., inc.



- Material Safety Data Sheet -

Lead Acid Battery Wet, Filled with Acid SIC SECUDIAL PROPERTY OF THE SECOND STATES OF THE S

Manufacturer's Name:

East Penn Manufacturing Co., Inc.

Deks Road, Lyon Station, PA 19536

Telephone Number for Information: (610) 682-6361

Emergency Telephone Number: CHEMTREC: 1-800-424-9300,

In Washington D.C. of outside continental U.S., call 1-202-483-7616

Date: April 2000

Trade Name: Electric Storage battery, SLI or Industrial battery

Classification: Battery wee, filled with acid, electric storage

UN2794

HAZARDOUS INGREDIENTS/IBENTITY INFORMATION

Hazardous Components Specific Chemical Identity (Common Name (3))	osha pel	ACGIH TLV	Range Percent By Weight	Average
Lead, CAS #7439921	0.05 mg/m²	0.05 mg/m²	43-70	1 20
0.48 A 2 CA C #1664070	1.00 mg/m	1.00 mg/m	20-44	<u> </u>
Sulfuric Acid, CAS #7664939	0.50 mg/m	0.50 mg/m	0-4	<1
Antimony, CAS #7440360		0.01 mg/m	<01	-
Arsenic, CAS #7440382	0.01 mg/m	0.01 HE/M	5-10	8
Polypropylane, CAS #9003070			3-10	1 - 2
	1.0 mg/m	1.0 me/m		NEW YORK OF THE OWNER.

PHYSICAL CHEMICAL CHARACTERISTICS

Electrolyto (Spifuric Acid):

Appearance and Odor: Clear, Odorless, Colorless

Boiling Boint: approximately 235° F

Evaporation Rate (Butyl Acetate-1): less than 1,0

Melting Point NA

Solubility in Water: Completely

Specific Gravity (H₂0=1): 1.220 - 1.325

Vapor Deasity (AIR=1): N/A

Vaper Pressure (mm Hg): 13

SECTIONIV

FIRE AND EXPLOSION BAZARD DATA

Flash Point (Method Used): Non-Flammable

Flammable Limits: Hydrogen Gas

UEL 74% LEL: 4%

Extinguishing Media: Class ABC extinguisher, CO2

Special Fire Fighting Procedures: Cool exterior of battery if exposed to fire to prevent rupture. The said mist and vapors in a fire

situation are corresive. Wear special respiratory protection (SCBA) and clothing. Unusual Fire and Explosion Hazards: Hydrogen gas, which may explode if ignited, is produced by this battery, especially when

charging. Use adequate ventilation; avoid open flames, sparks, or other sources of ignition.

REACTIVITY IN INC.

Condition to Avaid: Prolonged overcharging, sources of ignition

Incompatibility (Materials to Avoid): Sulfuric Acid: Contact with combustibles and organic materials may cause fire and explosion. Also reacts violently with strong reducing agents, metals, swong oxidizers and water. Contact with metals may produce toxic sulfur dioxide fumes and may release flammable hydrogen gas.

Hazardous Decomposition of By-Products: Sulfuric Acid: Excessive overcharging or fire may create Sulfur trioxide, carbon

monoxide, sulfuric acid mist, sulfor dioxide, and hydrogen. Lead Commonings: Contact with strong acid or base or presence of rescent hydrogen may generate highly toxic armine gas. MSMS: Bailery Wet, Filled with Acid: Fage 2 of 3

CASECTION VI HEALTH HAZARD DATA

Route(s) of Entry: Not Applicable under normal use. (Inhalation, skin contact, and ingestion)

Health Hazards (Acute and Chronic): Do not open battery, avoid contact with internal components. Internal components are Oxide lead and electrolyte. Short term exposure: Sulfuric seid may cause initation of eyes, note, and throat. Prolonged contact may cause severe burns. Long terra exposure: Repeated contact causes irritation and skin burns. Repeated exposure to mist may cause erosion of seeth, chronic eye unitation and/or chronic inflammation of the nose, throat, and broachial tubes. TARGET ORGAN: (Electrolyte) respiratory system, eyes, skin, and teeth

Carcinogenicity:

Sulfuric Acid: The International Agency for Research on Cancer (IARC) has classified "attong inorganic acid mist containing sulfuric sold" as a Category 1 carcinogen, a substance that is carcinogenic to humans. This classification does not apply to liquid forms of sulfuric acid contained within a battery. Inorganic acid mist (sulfuric acid mist) is not generated under normal use of this product. Misuse of the product such as overcharging, may result in the generation of sulfuric acid mist.

Lead Compounds: Lead is listed as a 2B carrinogen, likely in animals at extreme doses. Proof of carcinogenicity in humans is lacking at present

Arrenic: Listed by National Toxicology Program (NTP), IARC, OSHA and MIOSH as a carchiogen only after prolonged exposure at high levels.

Signs and Symptoms of Exposure: Acid contact may cause intitation of eyes, nose and throat. Breathing of mist may produce respiratory difficulty. Contact with eyes and skin causes irritation and skin burns. Sulfune acid is a CORROSIVE chamical.

Medical Conditions Generally Aggravated by Exposure: Sulfuric Acid Mist exposure may aggravate medical conditions such as, pulmonary edema, bronchitis, emplaysema, dental erosion, and traceobronchins. Pregnant women and children must be protected from lead exponere.

Emergency and First Aid Procedures: (Sulfuric Acid)

- 1) Flush contacted area with large amounts of water for at least 15 minutes. Remove contaminated clothing and obtain medical attention if necessary. Eye wash and/or emergency shower should be readily available.
- 2) If swallowed, give large volumes of water. DO NOT induce vomiding, obtain medical treatment.

 SECTIONIVIT

 PRECAUTIONS FOR SARE HANDLING AND USE

Steps to be Taken in Case Material is Released or Spilled: SULFURIC ACID: Dilute spill captionsly with five to six volumes of water and gradually neutralize with sedium bicarbonate, seda ash or lime. When exposure level is not known, wear NIOSH approved positive pressure self-contained breathing apparatus. Reference North American Emergency Response Guidebook, #154. Waste Disposal Method: Lead-acid batteries are completely recyclable. For information on returning batteries to East Peon for recycling, connect your Fast Penn Representative. Dispose of any collected material in accordance with local, state or applicable federal regulations.

Procautions to be Taken in Handling and Storing: Store away from reactive material as defined in Section V, Reactivity Data. Place cardobrd between layers of smocked baneris to avoid damage and short circuit. Do not allow metallic materials to similtaneously

Other Precautions: Sodium bicarbonate, soda sah, aand, or lime should be kept in same general area for emergency use. Keep away from sources of ignition during charging sec Section IV on generation of hydrogen gas. If battery case is broken, avoid direct contact with internal components.

CONTROL MEASURES

Mempiratory Protection (Specific Type): Respirator required when PEL is exceeded or employee witness is respiratory unitation. (see Section VL Health Hazard Data).

Ventilation: Must be provided when charging in an enclosed mea. (29CFR1910.178(g) and 305(j)(7)

Mechanical (general): Acceptable at 1 to 4 air exchanges/hour or to maintain air concentrations below the PEL. Local Exhaust Preferred

Other: Local building/fire codes may require explosion proof fans and equipment

Protective Gloves: Acid resistant

Eve Protection: Preferred, safety glasses, goggies, face shield

Other Protective Clothing or Equipment: Acid resistent aprona, boots, and protective clothing

Work Liggienic Practices: Good Personal hygiene and work practices are mandatory.

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MSDS: Batte	ry Wet, Filled with	cld: Page 3 of

SECTIONIX

OTHER REGULATORY INFORMATION

NFFA Hazard Rating	Sulfuris Acid		Lead
Health (Blue)	3	•	3
Flammability (Red)	0		0
Reactivity (Yellow)	2	•	0
Note: Sulfurie acid is water-reactive if	concentrated.		

U.S. DOT: Buttery Wet, Filled with Acid

Hazard Class/Division 8

ID Number UN2794

Packing Group III
Label Requirement Corresive

RCRA: Spent lead-sold batteries are not regulated as hazardous waste when recycled. Spilled sulfuric acid is a characteristic hazardous waste, EPA hazardous waste number D002 (corresivity).

CERCLA (Superfield) and EPCRA (Emergency Planette and Caramemity Right to Know ACT)

a) Reportable Quantity (RQ) for spilled 100% sulfuric acid is 1000 lbs.

b) Sulfuric acid is a listed "Extremely Hazardous Substance" under EPCRA with a Threshold Planning Quantity (TPQ) of 1000 lbs.

c) EPCRA Section 312 Tier II reporting required for batteries if sulfuric acid is present in quantities of 500 lbs or more and/or lead is present in quantities of 10,000 lbs or more.

California Prop 65: This product contains chemicals known to the State of California to cause cancer, birth defects and other reproductive history.

For additional information concerning East Penn Manufacturing Co., Inc. products or questions concerning the content of this MSDS please contact your East Penn representative.

This information is accurate to the bast of East Penn Mig. Co.'s knowledge or obtained from sources believed by East Penn to be accurate. Before using any product, read all warnings and directions on the label.

MAYERIAL SAFETY DATA SHEET

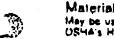
TO: ED EDDING

PROM, BOD FLICKER

FAX NO. (703) 669-8699

NUMBER OF PAGES -2-

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U.S. Department of Labor Material Safety Data Shoot May be used to comply with Decupational Safety and Health Administration USHA's Harard Communication Standard. (Non-Mandatory Form) 25 GFR 1910 1800 Blandard must be Form Approved



consulted for specific requirements. OMS No. 1218-0072 here. Sink spaces are not permitted. If any item is not applicable of no information is profable, the space must be marked to indice's their IDENTITY (As Used on Label and Util) FPM lead allow parts Section I Manufacturer's Name Emergency Telephone Number East Penn Manufacturing Co., Inc. (215)682-6361 Address (Number, Steel, Cay, State, and ZIP Code) releptione Number for Information Deka Road 12151682-6361 Date Prepared Lyon Station, PA 19536 June 27, 1989 Signature of Properor (optional)

Section II — Hazardous Ingredients/Identity Information

Hazardnus Compone	me (Specific Chemical Identity: Cor	nmon Name(s)	OSHA PEL	ACOIH TLV	Pacammended	46 (aprioral)
Lead	(7439-92-1)		0.05mg/m ³	0,15mg/m ³	(SARA III)	>94.09
Antimony	(7440-35-0)	7	0.5 mg/m3	$0.5.59/9^3$	(SARA III)	2.8-6.0
Arsenic	(7440-38-2)		0.01mg/m ³	0.2mg/m ⁻³		< 0.28
Tin	(7440-31-5)		2.0 mg/m ³	2.0 mg/m ³		<u> </u>

Additional elements such as cooper, silver, nickel, etc. may be present, however, their concentration is less than 0.05%.

Boling Paint	lead	1740°C	Specific Gravity (HgO = 1)	11.3
1mmHg at 973 C			Meking Point	328 ⁰ C
Vapor Density (AIR - 1)	~~~~~		Evaporation Rate	
not anol	icable (n/e	\$.	(Bulyl Acetale + 1)	

Solubility in Weles

Appeliance and Odor bluish-gray soft metal

Section IV - Fire and Explosion Hazard Data

LEL Flammable Limits Plast: Point (Method Used) not available not available

Esimpushing Media Dry chemical and/or carbon dioxide. Use water fog or alcohol foam for larger fires. Special Fire Fighting Procedures Highly toxic lead fumes may evolve when the metal is heated. Wear protective clothing and a self-contained breathing apparatus.

Lead dust is a moderate fire and explosion hazard when exposed to heat or flame. pigs and parts may contain cavities of moisture when stored in a wet environment; entrapped moisture may expend explosively when melted or heated OSHA 174, Sept 1985 (Reproduce locally)

Section V — Reactivity Data	31 9204					reference file
Section Section Name Consider in section in the property of the proper	Section V -	Reactivity Date)			
Section VI - Health Hazard Date Market Commontant Market Com	Slabith		1	Curolighe le Aveld	hla undan as-	
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Section VI — Health Mears Only Section VI — Section VI — Mears of Common VI — Section VI — Personnel VI — Section VI — Personnel Secti	chierine'	rifilioride,	OL	fused ammonium nitra	te poses an ex	plosion risk. Contact with
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Map(s) is kept with this application located in the Public Information Center of our Salt Lake City office.